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EXAMINER

WEIDNER, TIMOTHY J

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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**Office Action Summary**

Application No.

10/788,907

Applicant(s)

CUTLER, ROSS

Examiner

Timothy Weidner

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/30/05</u>  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Drawings*

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the signature, request, and reply signals indicating the type of device as in claims 2, 16, 17, 25, and 26, the audio watermark as in claims 4-6, the encryption/decryption of claims 11, 12, 22, and 28, and the confirmation actuator only capable of being activated by a person physically present in the delimited space as in claims 13, 23, and 29 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

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the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 30 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Computer readable medium may be "carrier wave" as disclosed in at least page 11 lines 7-30, which is a form of energy not falling into one of the four statutory categories of invention, i.e. it is not a process, machine, manufacture, or composition of matter.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 3 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/869119. Although the conflicting claims are not identical, they are not patentably distinct from each other because the features of instant claim 3 not present in copending claim 1 are: microphone, loudspeaker, and signals that are transmitted in a manner that substantially limits their reception to a delimited space. While the copending claim 1 does not specify these features, it is well known in the art to transmit audio signals in a manner that substantially limits their reception to a delimited space, and doing so inherently teaches the signals must have been transmitted and received among devices in the delimited space by a loudspeaker and microphone, respectively.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 15, 19, 20, and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Krzyzanowski et al. (US 2004/0133704 A1, herein "Krzyzanowski").

Regarding claim 15, Krzyzanowski teaches a computer-implemented process for a discovering electronic device among at least one discoverable electronic devices, each of which is connected to a common network and located in the same delimited space (paragraphs 0035, 0052, 0068), to discover the presence and network address of one or more of said discoverable electronic devices to facilitate the transfer of data and other communications over the common network (paragraph 0072), said process comprising using a computer to perform the following process actions: the discovering device receiving a signal transmitted by a discoverable electronic device (paragraph 0072; "legacy bridge device emits an IR signal to a mobile controller"), wherein the signal comprises data representing the address assigned to the discoverable device on the common network (paragraph 0069); and wherein the signal is not transmitted via the common network and is transmitted in a manner that substantially limits its reception to the delimited space (paragraph 0072; "IR signal" is inherently limited to the delimited space because IR does not penetrate walls); and the discovering device using the received network address to establish communications via the common network with the discoverable device that transmitted the address (paragraph 0072; "mobile controller transmits the unique ID ... over an IP network").

Regarding claim 19, Krzyzanowski teaches each discoverable device comprises an infrared (IR) transmitter and the discovering device comprises an IR receiver (paragraph 0070), and wherein the signal transmitted by a discoverable electronic device is an IR signal emitted from its IR transmitter (paragraph 0072), and wherein the process action of the discovering device receiving a signal transmitted by a

discoverable electronic device comprises receiving the signal via its IR receiver (paragraph 0072).

Regarding claim 20, Krzyzanowski teaches the IR transmitter of each discoverable electronic device is powerful enough to extend throughout the delimited space (paragraph 0052).

Regarding claim 23, Krzyzanowski teaches one or more of the discoverable devices further comprises a confirmation actuator which is only capable of being activated by person physically present in the delimited space (paragraphs 0061, 0088, 0089), and wherein a person must activate the confirmation actuator on a discoverable device having one before that discoverable device will transmit its signal (figure 11, steps 1104, 1112).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 2, and 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krzyzanowski et al. (US 2004/0133704 A1, herein "Krzyzanowski") in view of Tie et al. (US 2006/0143458 A1, herein "Tie") and Lee et al. (US 2002/0080800 A1, herein "Lee").

Regarding claim 1, Krzyzanowski teaches a system for a discovering electronic device to discover the presence and network address of one or more discoverable electronic devices (paragraph 0072) which are connected to the same network as the discovering device and which are located in the same delimited space as the discovering device (paragraphs 0035, 0052, 0068), comprising: a general purpose computing device residing in the discovering electronic device (paragraph 0037); a computer program comprising program modules executable by the general purpose computing device, wherein the computing device is directed by the program modules of the computer program to, receive a signal transmitted by the discoverable electronic device which comprises data representing the network address (paragraph 0069, 0072), wherein the signals are not transmitted via the network and are transmitted in a manner that substantially limits their reception to the delimited space (paragraph 0072; "IR signal" is inherently limited to the delimited space because IR does not penetrate walls).

However, Krzyzanowski does not teach the signature, request, and reply.

Tie, which is in the same field of endeavor, teaches receiving a signature signal transmitted by a one of said one or more discoverable electronic devices (paragraph 0029), wherein the signal comprises data representing a signature of the discoverable device indicative of its presence in the delimited space and its being accessible via said



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network (paragraph 0009), transmitting a request signal for receipt by the discoverable electronic device whose signature was received (figure 3, paragraph 0029), and receiving a reply signal transmitted by the discoverable electronic device whose signature was received (figure 3, paragraph 0030) for the purpose of ensuring the security of mobile terminal access and high confidentiality of communication (paragraph 0006). It would have been obvious to one of ordinary skill in the art at the time the invention was made to, in addition to the signals taught by Krzyzanowski, perform signature, request, and reply functions to ensure the security of mobile terminal access and high confidentiality of communication.

Lee, which is in the same field of endeavor, teaches the request signal requests the address assigned to that discoverable device on the network to be transmitted to the discovering device (paragraph 0027), and replying with data representing the requested network address (paragraph 0027) for the purpose of providing a VLAN data switching method using ARP packets which enables routing procedures to be minimized (paragraph 0016). It would have been obvious to one of ordinary skill in the art at the time the invention was made to, in addition to the functions taught by Krzyzanowski, obtain the network address using request and reply signals to provide a VLAN data switching method using ARP packets which enables routing procedures to be minimized.

Regarding claim 2, Krzyzanowski teaches the signal transmitted by the discoverable electronic device further comprises an indicator indicating the type of electronic device it is (paragraph 0069; MAC address inherently indicates type because

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MAC addresses always contain a type field, e.g. organization (OUI) or multicast/unicast bit), and wherein transmitting a request signal (paragraph 0072; "mobile controller transmits the unique ID to a central server) is executed only for a discoverable device of the type that it is desired for the discovering device to establish communications with (paragraph 0072; "mapping function ... maps legacy device bridges"), wherein the device type is ascertained from the indicator included in the signal transmitted by the discoverable electronic device (paragraph 0069, 0072; "maps the unique ID").

However, Krzyzanowski does not teach the signature and request.

Again, Tie teaches the signature (paragraph 0029) and request (figure 3, paragraph 0029) signals for the purpose of ensuring the security of mobile terminal access and high confidentiality of communication (paragraph 0006). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Krzyzanowski and Lee with the signature and request of Tie to ensure the security of mobile terminal access and high confidentiality of communication.

Regarding claim 10, Krzyzanowski does not teach the signature signal is transmitted by a discoverable electronic device on a periodic basis. Examiner takes Official Notice that transmission of a discovery signal, either signature or request, on a periodic basis is well known in the art of network device discovery for the purpose of updating common network devices such as bridge devices, network controllers, switches, routers, etc. with the most recent network configuration for allocating resources and directing traffic. It would have been obvious to one of ordinary skill in the art at the time the invention was made to repeat the transmission of the signal of

Krzyzanowski on a periodic basis to update the common network devices with the most recent network configuration.

Regarding claims 11 and 12, Krzyzanowski does not teach the signature and reply signals transmitted by a discoverable electronic device are encrypted, and wherein the program modules for receiving the signature and reply signals transmitted by a discoverable electronic device comprise a sub-module for decrypting the signals.

Tie teaches the signature and reply signals transmitted by a discoverable electronic device are encrypted (paragraphs 0029, 0037), and wherein the program modules for receiving the signature and reply signals transmitted by a discoverable electronic device comprise a sub-module for decrypting the signals (paragraph 0038) for the purpose of ensuring the security of mobile terminal access and high confidentiality of communication (paragraph 0006). It would have been obvious to one of ordinary skill in the art at the time the invention was made to, using the signals taught by Krzyzanowski and Lee, encrypt and decrypt them to ensure the security of mobile terminal access and high confidentiality of communication (paragraph 0006).

Regarding claims 13 and 14, Krzyzanowski teaches one or more of the discoverable devices further comprises a confirmation actuator which is only capable of being activated by person physically present in the delimited space (paragraphs 0061, 0088, 0089), and wherein a person must activate the confirmation actuator on a discoverable device having one before that discoverable device will transmit its signals (figure 11, steps 1104, 1112).

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Krzyzanowski et al. (US 2004/0133704 A1, herein "Krzyzanowski") in view of Tie et al. (US 2006/0143458 A1, herein "Tie") and Lee et al. (US 2002/0080800 A1, herein "Lee") as applied to claim 1, and further in view of Hayek et al. (US 2002/0152314 A1, herein "Hayek").

Regarding claim 3, Krzyzanowski, Lee, and Tie teach signature, request, and reply signals. However, they do not teach using audio signals.

Hayek, which is in the same field of endeavor, teaches the discovering device and each discoverable device comprises a microphone and loudspeaker for receiving and transmitting audio signals, respectively (paragraph 0026), and wherein the signals are audio signals (paragraph 0023) for the purpose of transmitting a key providing access to privileged data on a site (paragraph 0014). It would have been obvious to one of ordinary skill in the art at the time the invention was made to, in addition to the system taught by Krzyzanowski, Lee, and Tie, use a microphone, loudspeaker, and audio signals to transmit a key providing access to privileged data on a site.

Claims 4-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krzyzanowski et al. (US 2004/0133704 A1, herein "Krzyzanowski") in view of Tie et al. (US 2006/0143458 A1, herein "Tie") and Lee et al. (US 2002/0080800 A1, herein "Lee") as applied to claim 1, further in view of Hayek et al. (US 2002/0152314 A1, herein "Hayek") as applied to claim 3, and further in view of Tewfik et al. (US 6,061,793, herein "Tewfik").

Regarding claims 4-6, Krzyzanowski, Lee, Tie, and Hayek teach the signature, request, and reply using audio signals. However, they do not teach the signals are low-amplitude audio signals inaudible to humans and embedded in the form of an audio watermark, or obtaining information from the audio watermark.

Tewfik, which is in the same field of endeavor, teaches the signals are low-amplitude audio signals inaudible to humans (column 2, lines 60-65, column 9, lines 1-15) and embedded in the form of an audio watermark (column 2, lines 39-51), and obtaining information from the audio watermark (column 7, lines 30-33) for the purpose of ensuring that the embedded data survives both legitimate and illegitimate data manipulation (column 2, lines 33-36). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have signals of Krzyzanowski, Lee, Tie, and Hayek transmitted using low-amplitude audio signals inaudible to humans, embedded in the form of an audio watermark, and recoverable at the receiving end to ensure that the embedded data survives both legitimate and illegitimate data manipulation.

Regarding claims 7-9, Krzyzanowski, Lee, Tie, and Hayek teach the signature, request, and reply using audio signals. However, they do not teach the signals are audible to humans.

Tewfik teaches the signals are audible to humans (column 2, lines 39-51; "human-perceptible sounds"), and decoding the signal at the receiving end (column 7, lines 30-33) for the purpose of ensuring that the embedded data survives both legitimate and illegitimate data manipulation (column 2, lines 33-36). It would have

been obvious to one of ordinary skill in the art at the time the invention was made to have signals of Krzyzanowski, Lee, Tie, and Hayek transmit using signals that are audible to humans, and decoding the signals at the receiving end to ensure that the embedded data survives both legitimate and illegitimate data manipulation.

Claims 16-18, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krzyzanowski et al. (US 2004/0133704 A1, herein "Krzyzanowski") as applied to claim 15 above, in view of Tie et al. (US 2006/0143458 A1, herein "Tie").

Regarding claim 16, Krzyzanowski teaches the signal transmitted by the discoverable electronic device further comprises a an address expressly indicating the type of electronic device it is (paragraph 0069; MAC address inherently indicates type because MAC addresses always contain a type field, e.g. organization (OUI) or multicast/unicast bit), and inherently indicating its presence in the delimited space and being accessible via said common network (paragraphs 0035, 0052, 0068).

However, Krzyzanowski does not teach the signature.

Tie, which is in the same field of endeavor, teaches the signature (paragraph 0029) for the purpose of ensuring the security of mobile terminal access and high confidentiality of communication (paragraph 0006). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Krzyzanowski with the signature of Tie to ensure the security of mobile terminal access and high confidentiality of communication.

Regarding claim 17, Krzyzanowski teaches the process action of the discovering device using the received network address to establish communications via the

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common network with the discoverable device that transmitted the address is performed only for a discoverable device of the type that it is desired for the discovering device to establish communications with (paragraph 0072; "mapping function ... maps legacy device bridges"); wherein the device type is ascertained from the signal transmitted by the discoverable electronic device (paragraphs 0069, 0072; MAC address inherently indicates type because MAC addresses always contain a type field, e.g. organization (OUI) or multicast/unicast bit).

However, Krzyzanowski does not teach the signature.

Tie teaches the signature (paragraph 0029) for the purpose of ensuring the security of mobile terminal access and high confidentiality of communication (paragraph 0006). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Krzyzanowki with the signature of Tie to ensure the security of mobile terminal access and high confidentiality of communication.

Regarding claim 18, Krzyzanowski teaches the signal is in the form of an identifier that distinguishes the discoverable electronic device transmitting the signal from all other discoverable electronic devices in the delimited space (paragraph 0069).

However, Krzyzanowski does not teach the signature.

Tie teaches the signature (paragraph 0029) for the purpose of ensuring the security of mobile terminal access and high confidentiality of communication (paragraph 0006). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Krzyzanowki with the signature of Tie

to ensure the security of mobile terminal access and high confidentiality of communication.

Regarding claim 22, Krzyzanowski does not teach the signal transmitted by a discoverable electronic device is encrypted, and wherein the process action of the discovering device receiving a signal transmitted by a discoverable electronic device comprises an action of decrypting the signal.

Tie teaches the signal transmitted by a discoverable electronic device is encrypted (paragraphs 0029, 0037), and wherein the process action for receiving the signature signal transmitted by a discoverable electronic device comprises decrypting the signal (paragraph 0038) for the purpose of ensuring the security of mobile terminal access and high confidentiality of communication (paragraph 0006). It would have been obvious to one of ordinary skill in the art at the time the invention was made to, using the signals taught by Krzyzanowski, encrypt and decrypt them to ensure the security of mobile terminal access and high confidentiality of communication.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Krzyzanowski et al. (US 2004/0133704 A1, herein "Krzyzanowski") as applied to claim 15 above.

Regarding claim 21, Krzyzanowski does not teach repeating the transmission of the signal on a prescribed periodic basis. Examiner takes Official Notice that transmission of a discovery signal, either signature or request, on a periodic basis is well known in the art of network device discovery for the purpose of updating common network devices such as bridge devices, network controllers, switches, routers, etc. with



the most recent network configuration for allocating resources and directing traffic. It would have been obvious to one of ordinary skill in the art at the time the invention was made to repeat the transmission of the signal of Krzyzanowski on a periodic basis to update the common network devices with the most recent network configuration.

Claims 24, 27, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krzyzanowski et al. (US 2004/0133704 A1, herein "Krzyzanowski") in view of Lee et al. (US 2002/0080800, herein "Lee").

Regarding claim 24, Krzyzanowski teaches a system for a discovering electronic device to discover the presence and network address of one or more discoverable electronic devices (paragraph 0072) which are connected to the same network as the discovering device and which are located in the same delimited space as the discovering device (paragraphs 0035, 0052, 0068), comprising: a general purpose computing device residing in the discovering electronic device (paragraph 0037); a computer program comprising program modules executable by the general purpose computing device, wherein the computing device is directed by the program modules of the computer program to, receive a signal transmitted by a discoverable electronic device which comprises data representing the network address (paragraph 0069, 0072), wherein the signals are not transmitted via the network and are transmitted in a manner that substantially limits their reception to the delimited space (paragraph 0072; "IR signal" is inherently limited to the delimited space because IR can not penetrate walls).

However, Krzyzanowski does not teach transmitting a request signal which requests the network address assigned to a discoverable device be transmitted to the

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discovering device, and receiving a reply signal transmitted by a discoverable electronic device which comprises data representing the requested network address.

Lee, which is in the same field of endeavor, teaches transmitting a request signal which requests the network address assigned to a discoverable device be transmitted to the discovering device (paragraph 0027), and receiving a reply signal transmitted by a discoverable electronic device which comprises data representing the requested network address (paragraph 0027) for the purpose of providing a VLAN data switching method using ARP packets which enables routing procedures to be minimized (paragraph 0016). It would have been obvious to one of ordinary skill in the art at the time the invention was made to, in addition to the functions taught by Krzyzanowski, obtain the network address using request and reply signals to provide a VLAN data switching method using ARP packets which enables routing procedures to be minimized.

Regarding claim 27, Krzyzanowski does not teach the request signal is transmitted on a periodic basis. Examiner takes Official Notice that transmission of a discovery signal, either signature or request, on a periodic basis is well known in the art of network device discovery for the purpose of updating common network devices such as bridge devices, network controllers, switches, routers, etc. with the most recent network configuration for allocating resources and directing traffic. It would have been obvious to one of ordinary skill in the art at the time the invention was made to repeat the transmission of the signal of Krzyzanowski on a periodic basis to update the common network devices with the most recent network configuration.

Regarding claim 29, Krzyzanowski teaches one or more of the discoverable devices further comprises a confirmation actuator which is only capable of being activated by person physically present in the delimited space (paragraphs 0061, 0088, 0089), and wherein a person must activate the confirmation actuator on a discoverable device having one before that discoverable device will transmit its signal (figure 11, steps 1104, 1112).

Claims 25, 26, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krzyzanowski et al. (US 2004/0133704 A1, herein "Krzyzanowski") in view of Lee et al. (US 2002/0080800 A1, herein "Lee") as applied to claim 24 above, and further in view of Tie et al. (US 2006/0143458 A1, herein "Tie").

Regarding claim 25, Krzyzanowski teaches transmitting a signal specifying the type of discoverable electronic device it is desired to obtain the network address for (paragraph 0069; MAC address inherently indicates type because MAC addresses always contain a type field, e.g. organization (OUI) or multicast/unicast bit), such that only the discoverable electronic device of the specified type which is present in the delimited space and accessible via said network transmits a signal (paragraphs 0035, 0052, 0068).

However, Krzyzanowski does not teach the request and reply.

Tie, which is in the same field of endeavor, teaches the request (figure 3, paragraph 0029) and reply (figure 3, paragraph 0030) for the purpose of ensuring the security of mobile terminal access and high confidentiality of communication (paragraph 0006). It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the teachings of Krzyzanowki with the request and reply of Tie to ensure the security of mobile terminal access and high confidentiality of communication.

Regarding claim 26, Krzyzanowski teaches the signal transmitted by the discoverable electronic device further comprises an address expressly indicating the type of electronic device it is (paragraph 0069; MAC address inherently indicates type because MAC addresses always contain a type field, e.g. organization (OUI) or multicast/unicast bit), and inherently indicating its presence in the delimited space and its being accessible via said common network (paragraphs 0035, 0052, 0068), thereby allowing the discovering device to determine if it wants to establish communications with the discoverable device over the network (paragraph 0072; "mobile controller sends the unique ID").

However, Krzyzanowski does not teach the signature and reply.

Tie teaches the signature (paragraph 0029) and reply (figure 3, paragraph 0030) for the purpose of ensuring the security of mobile terminal access and high confidentiality of communication (paragraph 0006). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Krzyzanowki with the signature and reply of Tie to ensure the security of mobile terminal access and high confidentiality of communication.

Regarding claim 28, Krzyzanowski does not teach the reply signal transmitted by a discoverable electronic device is encrypted, and wherein the program module for

receiving the reply signal transmitted by a discoverable electronic device comprises a sub-module for decrypting the signal.

Tie teaches the reply signal transmitted by a discoverable electronic device is encrypted (paragraph 0037), and wherein the program module for receiving the reply signal transmitted by a discoverable electronic device comprises a sub-module for decrypting the signal (paragraph 0038) for the purpose of ensuring the security of mobile terminal access and high confidentiality of communication (paragraph 0006). It would have been obvious to one of ordinary skill in the art at the time the invention was made to, using the signals taught by Krzyzanowski and Lee, encrypt and decrypt them to ensure the security of mobile terminal access and high confidentiality of communication.

Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Krzyzanowski et al. (US 2004/0133704 A1, herein "Krzyzanowski").

Regarding claim 30, Krzyzanowski teaches a computer-readable medium having computer-executable instructions for facilitating the discovery of the network address of a discoverable electronic device by a discovering electronic device (paragraph 0037), wherein each device is connected to a common network and located in the same delimited space (paragraphs 0035, 0052, 0068), said computer-executable instructions comprising: transmitting a signal comprising data representing the address assigned to the discoverable device on the common network from the discoverable device to the discovering device (paragraphs 0069, 0072), wherein the signal is not transmitted via the common network and is transmitted in a manner that substantially limits its reception

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to the delimited space (paragraph 0072; "IR signal" is inherently limited to the delimited space because IR can not penetrate walls).

However, Krzyzanowski does not teach repeating the transmission of the signal on a prescribed periodic basis. Examiner takes Official Notice that transmission of a discovery signal, either signature or request, on a periodic basis is well known in the art of network device discovery for the purpose of updating common network devices such as bridge devices, network controllers, switches, routers, etc. with the most recent network configuration for allocating resources and directing traffic. It would have been obvious to one of ordinary skill in the art at the time the invention was made to repeat the transmission of the signal of Krzyzanowski on a periodic basis to update the common network devices with the most recent network configuration.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy Weidner whose telephone number is (571) 270-1825. The examiner can normally be reached on Monday - Friday 7:30 AM - 5:00 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on (571) 272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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TJW



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